

# Panasonic

Operating Instruction

Colour Television

TX-68KS30Z

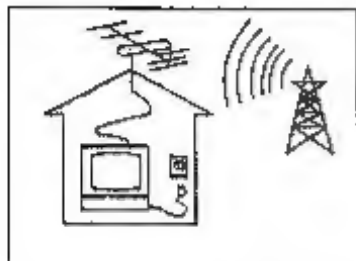
Please read the operating instructions completely before operating this set.

TQB4G0863

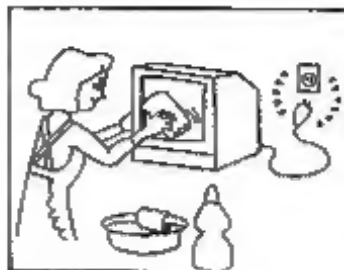
## Dear Panasonic customer

Welcome to the Panasonic family of customers. We hope that you will have many years of enjoyment from your new colour television.

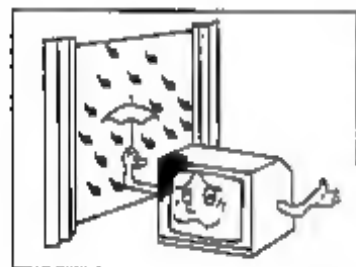
### Safety Instructions



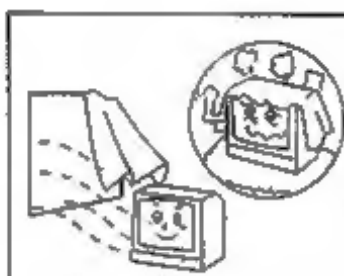
The TV set can be operated on AC SINGLE 230V, 50Hz.



The cabinet and picture tube can be kept in good condition by simply wiping with a clean, soft cloth moistened with mild detergent and water. Do not use solutions containing benzol, petroleum or a chemical cloth. For safety, remove the plug from the wall outlet.



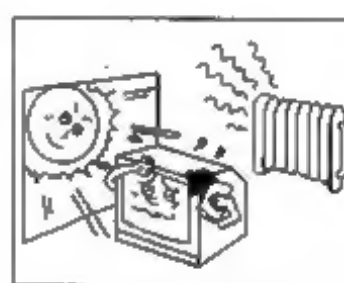
To prevent damage which may result in fire or electrical shock, do not expose the TV set to rain or excessive moisture.



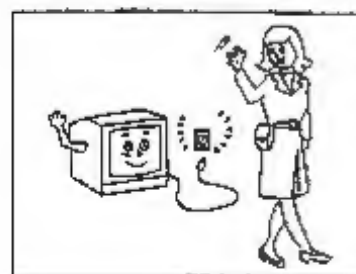
Adequate ventilation is essential to prevent failure of electrical components.



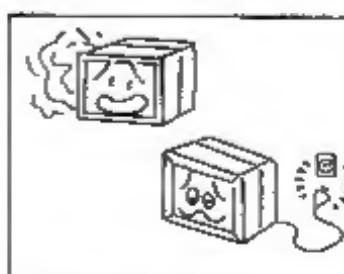
Do not remove the rear cover, as live parts are accessible when it is removed.



Avoid exposing the TV set to direct sunlight and other source of heat.



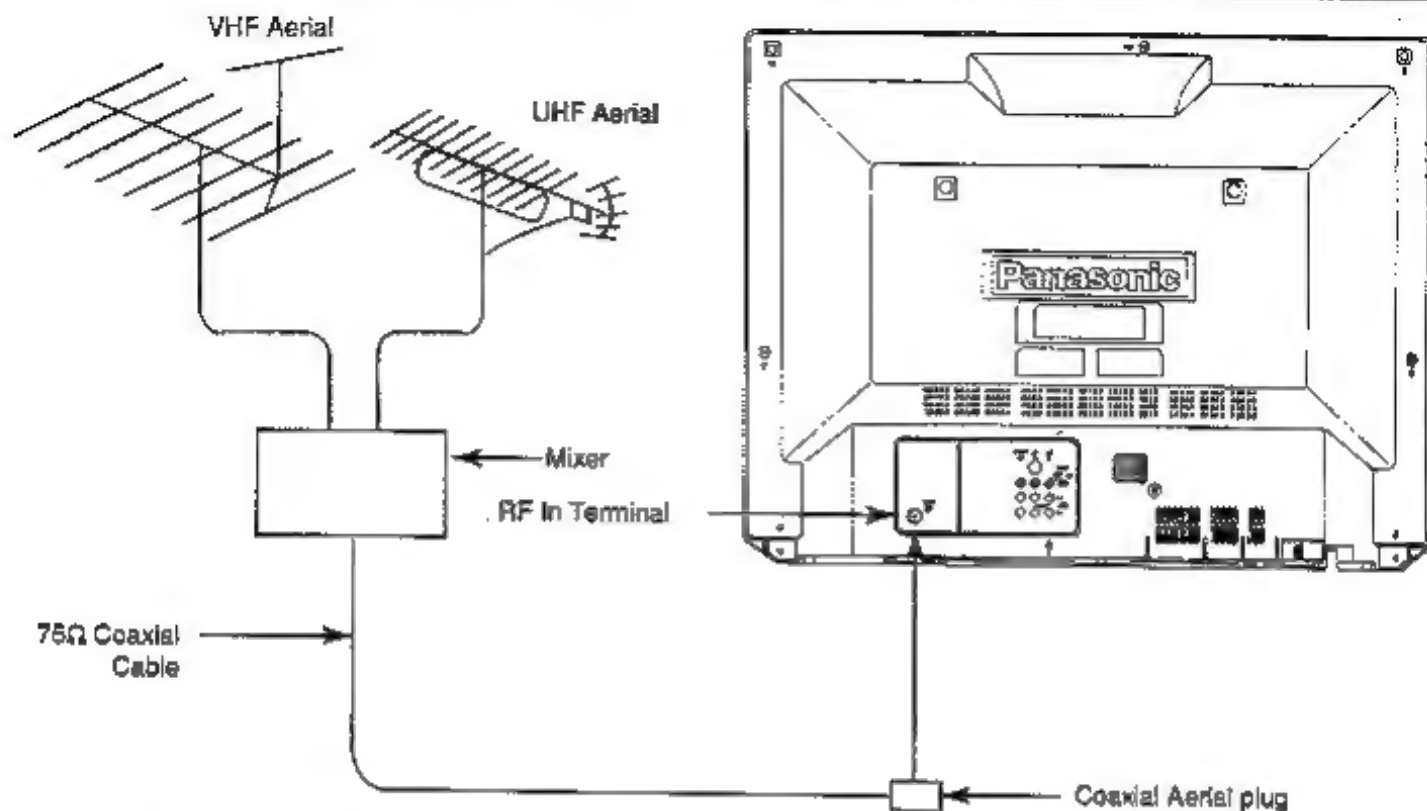
Remove the plug from the wall outlet (Power point) when the TV set is not used for a prolonged period of time.



Do not use this set if abnormal operation occurs.  
EX: smoke, odd sounds or smells, turn the power switch off and disconnect the AC power if you notice any unusual operation.

## Before Operating This Set

### Connect the Aerial Cable to the RF In Terminal



To obtain the best quality picture and sound, an external antenna, the correct cables (75 Ohm coaxial) and the correct terminating plug will be required.

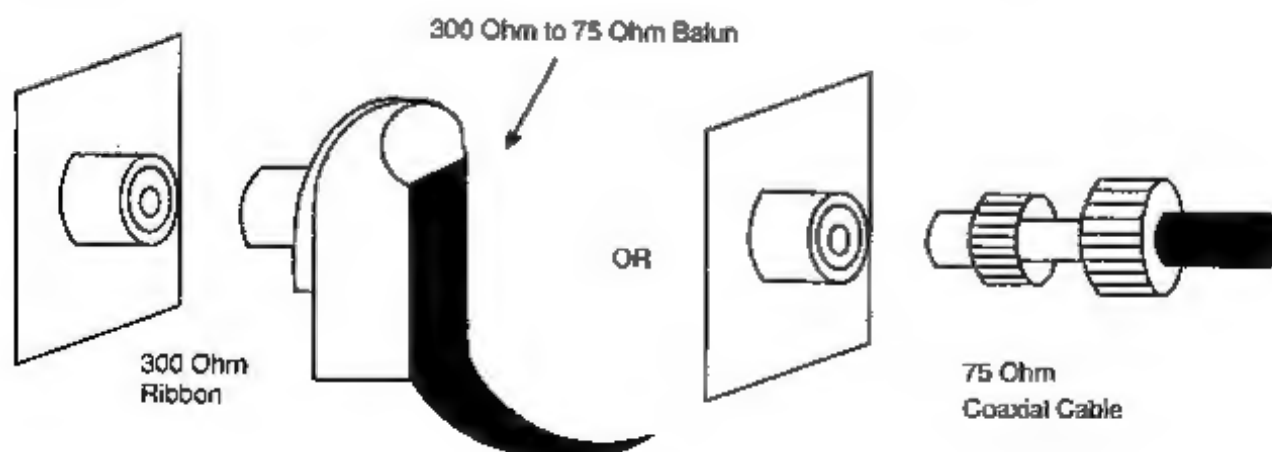
If a communal antenna system is used, you may require the correct connection cable and plugs between the wall antenna socket and your television receiver.

Your local Television Service Dealer may be able to assist you in obtaining the correct antenna system for your particular area and accessories required.

Any matters about antenna installation, upgrading of existing systems or accessories required, and the cost incurred, are the responsibility of the customer.

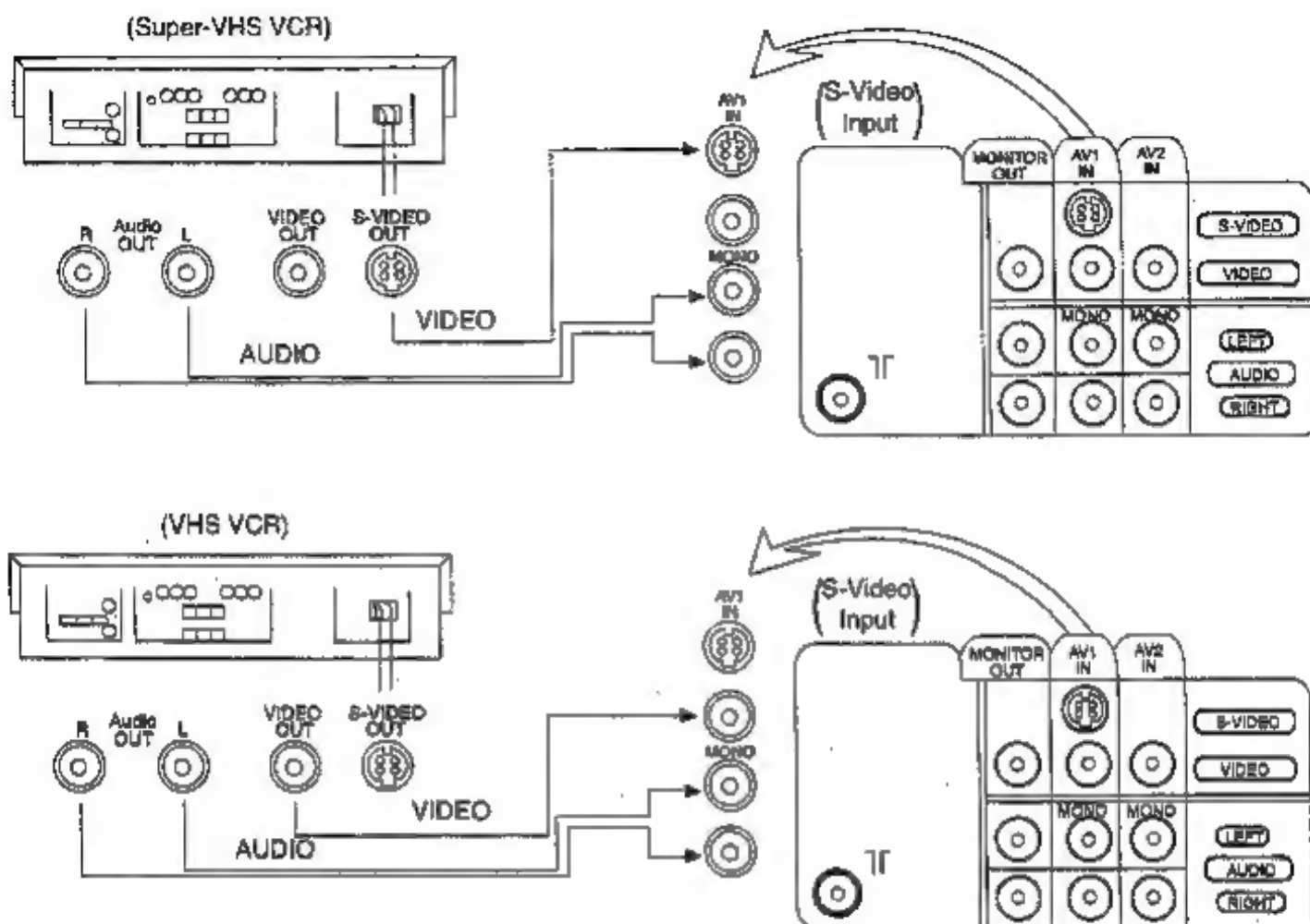
#### Note:

If your existing antenna system uses 300 Ohm to 75 Ohm Balun, see Below.



## Connection

### How to connect the "AV1 or AV2" Input Terminals.



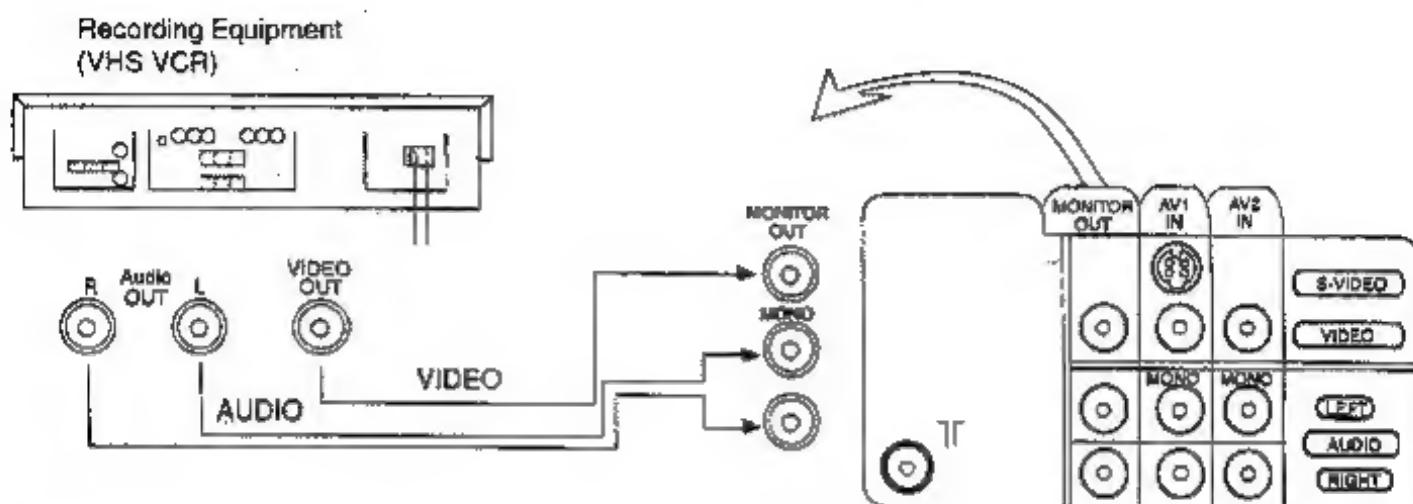
#### Note:

1. When Blue Back screen is selected ON and that AV mode has no input picture signal, the Background Colour of the TV screen will change to blue screen. (Refer to Blue Back function for details)
2. When the S-Video cable is connected to the S-Video terminal, the Phono Video input will be automatically switched off for that AV mode. AV-**S** indication will appear on the top left of the screen.
3. When a Monaural VCR is used, connect the Monaural Audio cable to the Audio "L" (Left) terminal.
4. Similar connections are available at the AV1 and AV2 input terminals. Select the desired AV input position by pressing the TV/AV button.
5. AV2 have two terminals, Front AV2 and Rear AV2 terminal, in case both terminals have the inputs, mechanical switch will switch off the rear input and only Front AV2 signal could be seen on the screen.

## Connections

### How to connect the AV MONITOR OUTPUT terminals to the other equipment.

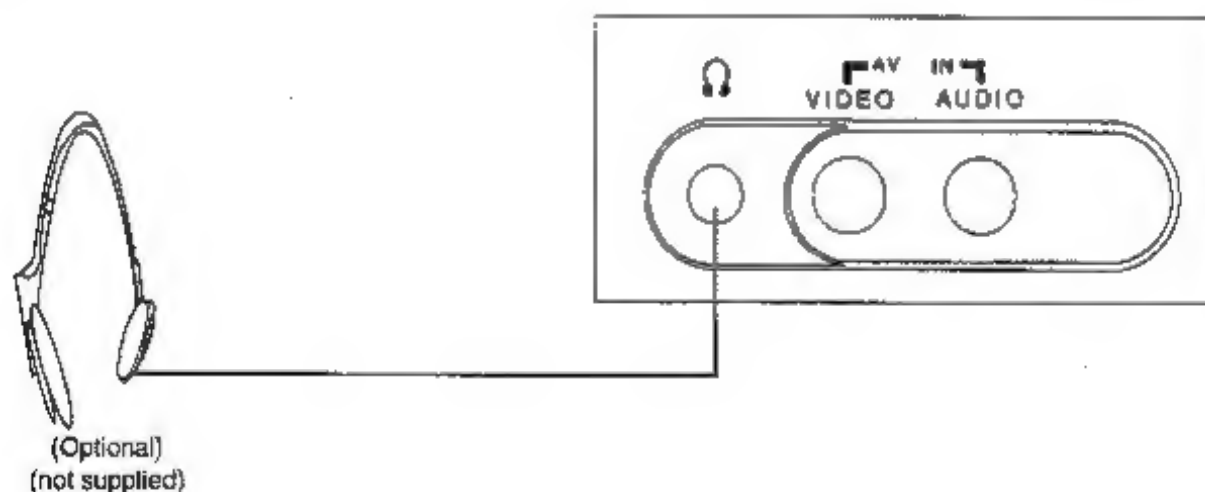
The monitor out terminal output the same signals as are on the TV screen at that time.  
e.g. TV programmes or signals from AV1 or AV2 input.



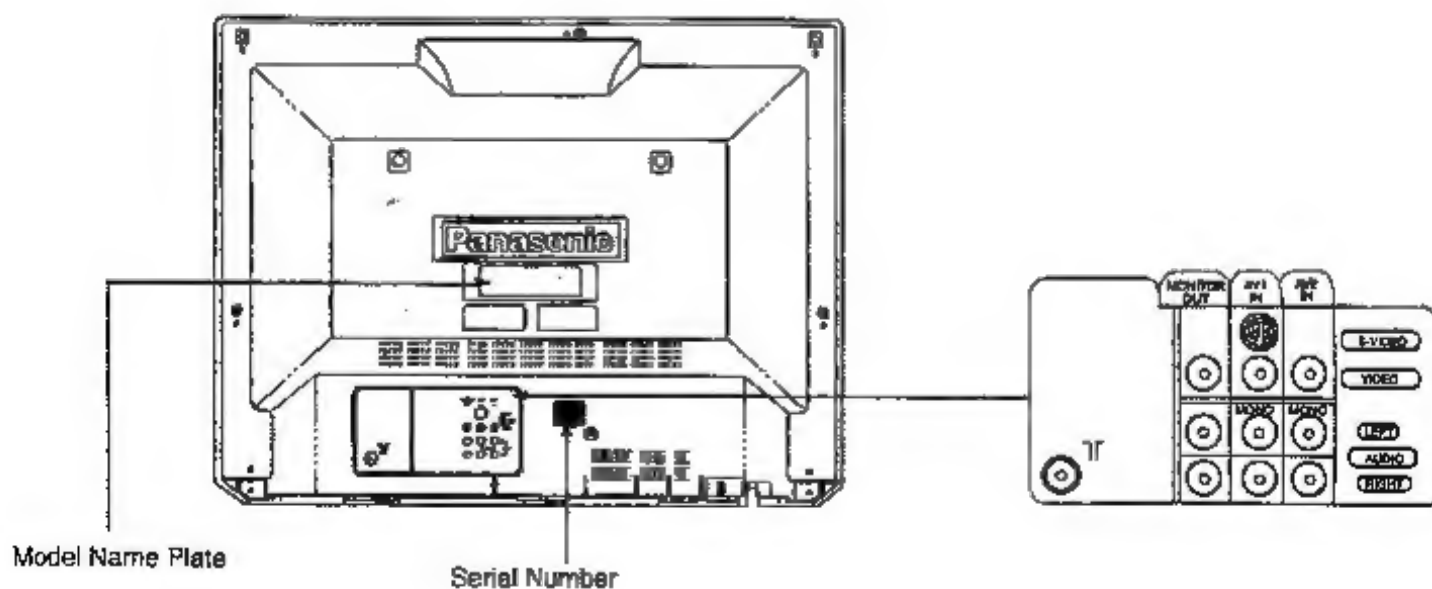
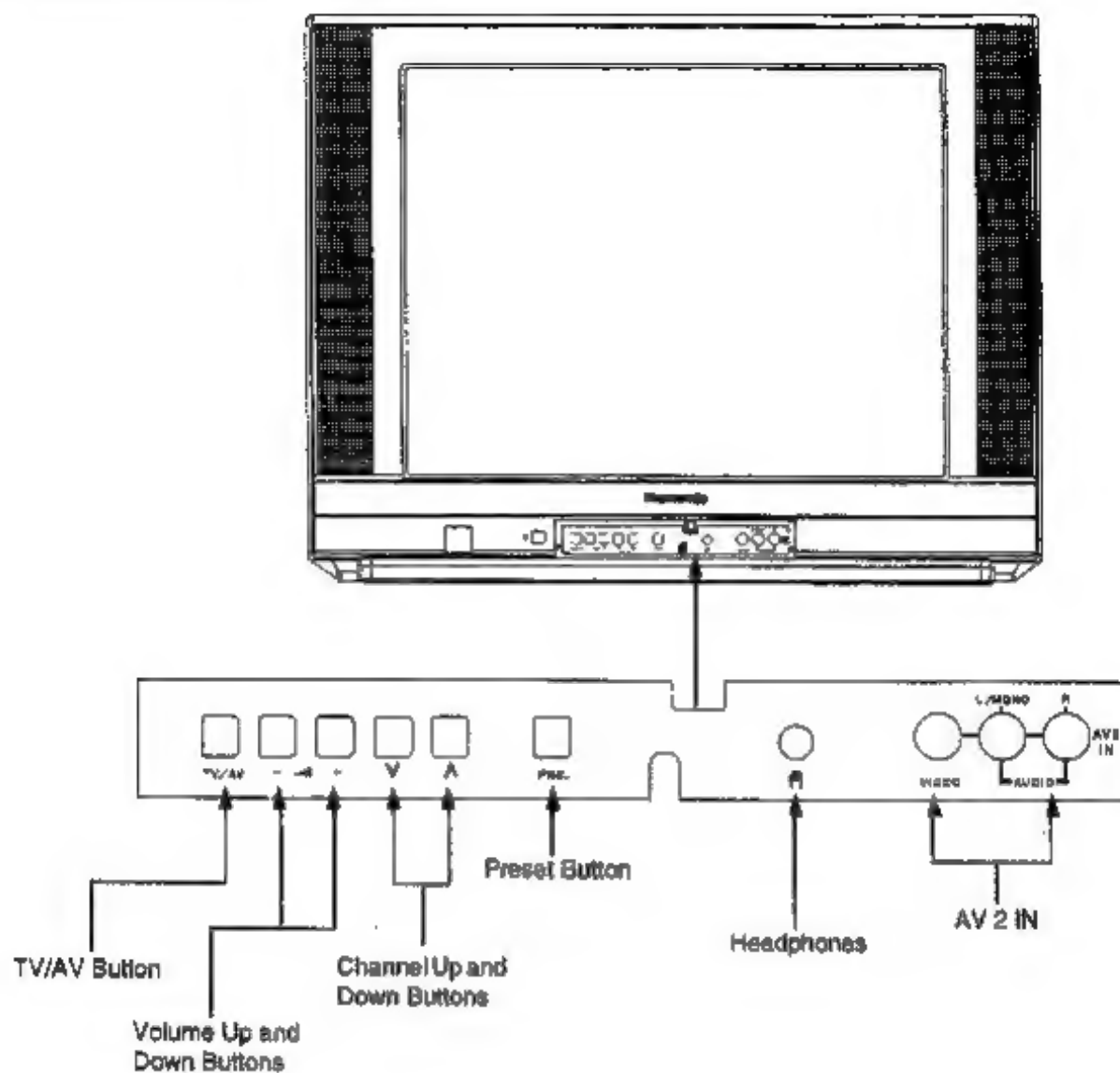
- Note:**
- (1) Never connect the same video recorder with both the VIDEO IN and MONITOR OUT terminals on this TV set, as this could cause incorrect operation.

### Connecting Headphones

When a headphones plug is inserted into the Headphones socket all speakers will be automatically disconnected; only the Headphones will function.



## Location of Control (TV)

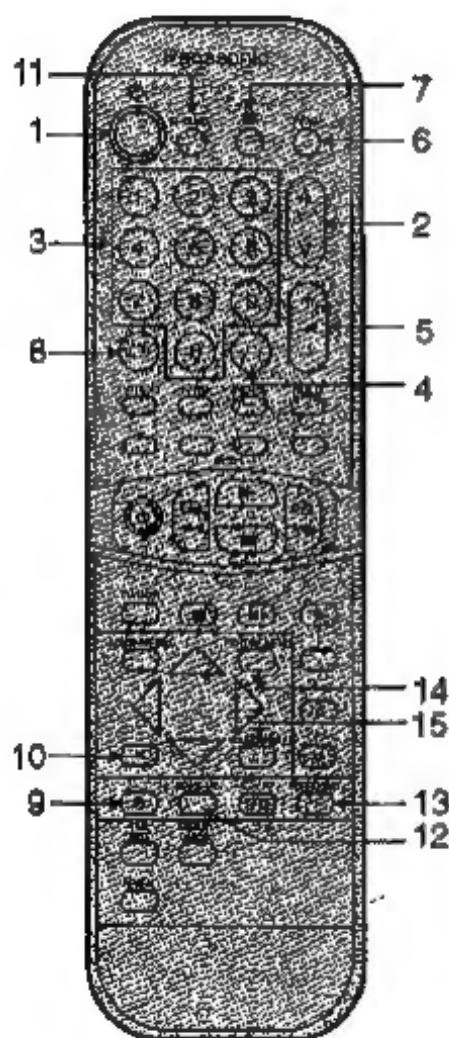


### Flow Chart of Main Menu

When the "MAIN MENU" button is pressed at the main menu screen, the screen display will return to the normal viewing condition. When the "MAIN MENU" button is pressed at each MENU screen (Picture, Sound, Features, Language, Preset), the screen display will return to the Main Menu screen.

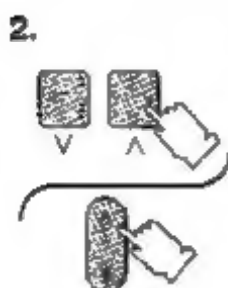
Press					
Select					
Symbol Mark					
On-Screen Indication					
Press					
On-Screen Indication (example)	     	    	  	  	      

## General Operation



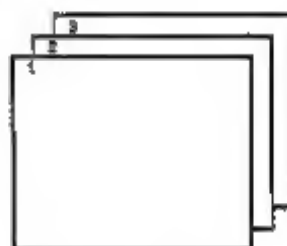
### To Switch Power on/off

The TV set must be switched on at the wall outlet and at the Main power switch. Press this button to turn the TV set ON, from stand-by mode. Press it again to turn off.



### Programme Number Selection

Press the programme number Up "▲" or down "▼" button to select the next higher or lower programme number.



### Direct Programme Number Selection (0 - 9)

e. g. To select programme number "1", press the "1" button.



### Two Digit Programme Number Selection

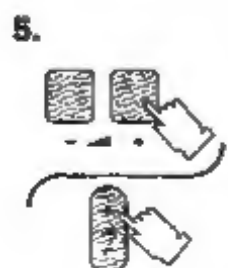
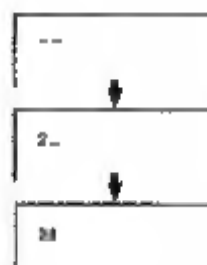
e.g. To select Programme Number "24".

Press the  $\oplus$  button.

Press the **2** button.

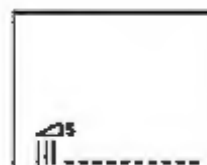
Press the **4** button.

Setting range 0 - 99



### Volume Adjustment

Press the Volume Up or Down button to increase or decrease the sound volume level.

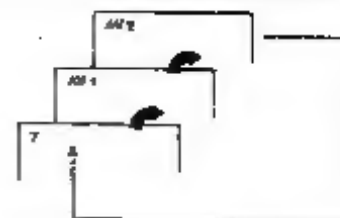
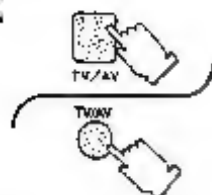


### Note:

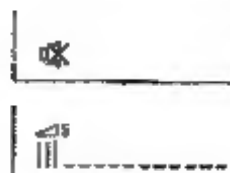
The on screen display will indicate both numerically and graphically the volume level. Numeric levels start at "0" for zero or no sound, and will increase up to 63 which is the maximum sound level.



6. **TV / AV Selection**  
Press the "TV/AV" button to select TV and AV input signal modes sequentially.



7. **Sound Mute Button**  
Press this button to mute the Sound completely.  
Press the button once again to restore the previous sound level, and cancel the mute.

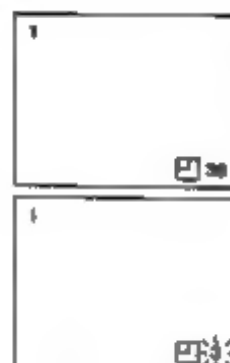
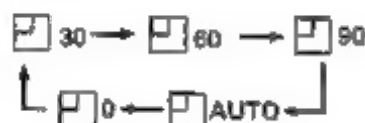


The "Mute" symbol will appear.  
(Colour changes to Red)

8. **Recall Button**  
Press the RECALL button to display the current system status. Press this button until display is cancelled.



9. **Off Timer Button**  
The TV set may be preset to switch to stand-by after a fixed period.  
By pressing "Off-Timer" button, you can select the preset time either 30, 60, or 90 minutes.



When the off-timer reaches its last 3 minutes, it starts blinking before going to stand-by condition.

**Note:**  
Setting Off-timer to AUTO mode. If the set is not switched off, when the TV station ends broadcasting, it will automatically go to the stand-by condition after 5 minutes. This AUTO mode will not operate when the TV receiver is in AV mode.

## How to cancel the OFF-timer setting:

1. Set the preset time condition to "0" mode by pressing the Off -timer button.
2. Turning the TV set off.

10. **Normal (N) Button**  
By pressing the Normal "N" Button on the Remote Control while Picture + Sound Control function is displayed, the selected function will be changed to the Normal Mode. Normalization will not occur if the function is not displayed when the "N" button is pressed. the Normal mode is the factory preset condition. Returning to this original condition is called "Normalization".



## General Operation

11.

### Rapid Tune Button

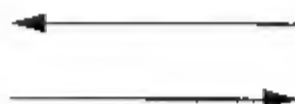
Press the button to access previously viewed channels.



PRESENT CHANNEL  
BEING VIEWED



LAST VIEWED  
CHANNEL



### 12. Wake Up Timer Button

1. Press the "WAKE UP TIMER" button.



2. Press the position left or right button to select the wake up timer.  
(Wake up timer will increase or decrease by 10 minutes each time the position left or right button is pressed.)



#### Note:

Maximum for Wake up timer is 12 hours.

3. After setting the wake up timer, switch the TV set to stand-by mode.  
(LED light will blink ON and OFF during stand-by mode)
4. When the time reached to the wake up timer setting the set will automatically on. (Press any button to cancel the wake up timer on screen display.)



#### Note:

- i) After the Wake Up time is set and the TV mode is still not switched off, the Wake Up timer will continue to count down until the timer is off.
  - ii) When Wake Up timer switch ON the TV set, the off timer is set to 90 minutes mode automatically. Press any button to cancel the off-timer. If no button is pressed, the TV set will switch off automatically after 90 minutes.
5. To cancel the Wake Up timer. You can choose any of the following:
    - i) Switch off the main power.
    - ii) Press the position left or right button, until OFF is reached.
    - iii) Press the Normalize button when Wake Up timer OSD is displayed.

## 13. SURROUND

### Surround Sound Operation

The benefit of surround sound are enormous. With additional speakers you can be completely enveloped in sound; just as if you were at a concert hall or cinema. The surround effect does operate without external surround speakers, but is enhanced when they are connected. Such near surround speakers should not be sited in direct proximity to the listeners.

On-Screen display during surround mode.

	Type of broadcast	ON-Screen display
TV mode	MONO	MONO SURROUND ↕ SURROUND OFF
	STEREO	STEREO SURROUND ↕ SURROUND OFF
AV mode	Select AV mode	STEREO SURROUND ↕ MONO SURROUND ↕ SURROUND OFF

## 14. PICTURE MENU

### Picture Menu Operation

By pressing the PICTURE MENU button, you can sequentially select the Picture menu as shown below:

On-screen	Function
DYNAMIC	For watching in brighter environments. This menu selects a higher than normal level of contrast.
STANDARD	For watching in normal (evening) environments. This menu selects normal level of brightness and contrast.
SOFT	For watching in dark environments. This menu selects reduced level of contrast.

## 15. SOUND MENU

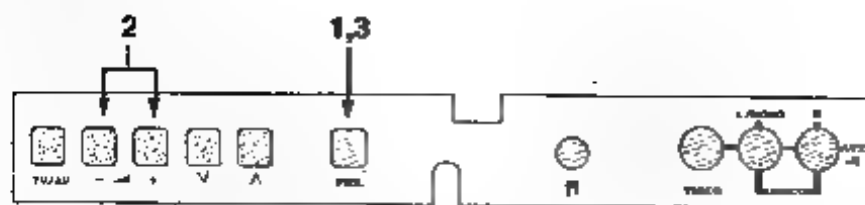
### Sound Menu Operation

By pressing the SOUND MENU button, you can sequentially select the Sound menus as shown below:

On-screen	Function
MUSIC	For music programme for example.
SPEECH	For news programme for example.
MOVIE	For movie programme for example.

# Tuning Procedure

## Automatic Tune



OR

1. Press the "PRE." (PRESET) button, until "AUTO TUNE" function is selected.

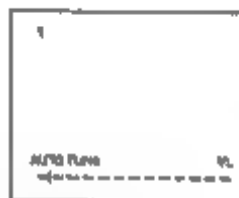


Channel Number Automatic Tune condition.

2. Press the "MAIN MENU" and "Position" buttons, until "AUTO TUNE" function is selected.

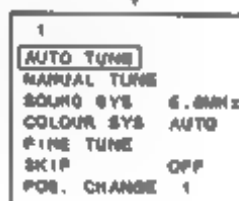


2. Press the Volume Up "+" button.



Search start.

2. Press the Position Right button.



The best tuning position is automatically memorized.

3. Press the "PRE." (PRESET) button 7 times.



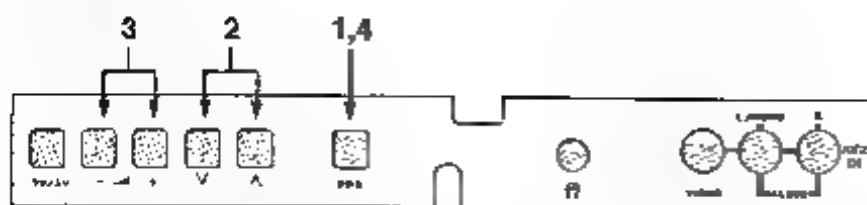
This returns the set to the normal viewing condition.

3. After all stations are tuned, press the "MAIN MENU" button twice.



# Tuning Procedure

## Manual Tune



OR

1. Press the "PRE." (PRESET) button twice, setting the Manual Tune mode.



1	AUTO TUNE	
	MANUAL TUNE	
	SOUND SYS	S. 50MHz
	COLOUR SYS	AUTO
	FINE TUNE	
	SKIP	OFF
	POS. CHANGE	1

Channel Number Manual Tune condition.

2. Press the "MAIN MENU" and "Position" buttons, until "MANUAL TUNE" function is selected.



2	AUTO TUNE	
	MANUAL TUNE	
	SOUND SYS	S. 50MHz
	COLOUR SYS	AUTO
	FINE TUNE	
	SKIP	OFF
	POS. CHANGE	2

Select the desired Channel Number.

3. Press either the Channel Up or Down button.



3. Press the Volume Up "+" or Down "-" button.  
Volume "+": Next higher Channel  
Volume "-": Next lower Channel



2		
	MANUAL TUNE	VL

Search Start.

3. Press the Position Left or Right button.  
Position left: Next lower Channel.  
Position right: Next higher Channel.



2	AUTO TUNE	
	MANUAL TUNE	
	SOUND SYS	S. 50MHz
	COLOUR SYS	AUTO
	FINE TUNE	
	SKIP	OFF
	POS. CHANGE	2

The best tuning position is automatically memorized.

4. Press the "PRE." (PRESET) button 6 times.



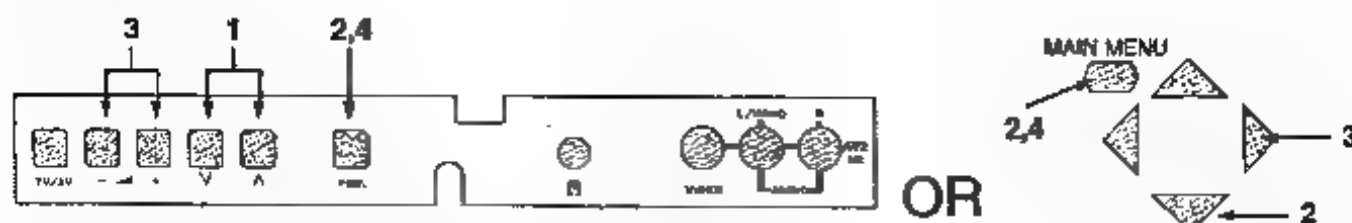

This returns the set to the normal viewing condition.

4. Press the "MAIN MENU" button twice.



# Tuning Procedure

## Fine Tune



Under normal reception condition, this function is not used. However, in areas of poor reception or constant interference, a slight adjustment on the fine tuning can improve the picture and sound quality.

**1.** Select the channel which you want to try to improve, using the Channel Up or Down buttons.

Select the desired Channel Number.

**2.** Press the "PRE." (PRESET) button 5 times, setting the Preset Menu to "Fine Tune".

Press the "MAIN MENU" and "Position" buttons, until "FINE TUNE" is selected.

Fine Tune condition.

1
AUTO TUNE
MANUAL TUNE
SOUND SYS 4.5MHz
COLOUR SYS AUTO
<b>FINE TUNE</b>
SKIP OFF
POS. CHANGE 1

**3.** Press the Volume Up "+" or Down "-" button until the clear picture is received.

Press the Position Left or Right button until the clear picture is received.

Fine Tune Start.

1
PRETUNE
-----
-----

Press the Position Left or Right button until the clear picture is received.

The AFC (Automatic Frequency Control) function is deactivated. The "A" symbol appears to the left of the Channel Number.

A 1
AUTO TUNE
MANUAL TUNE
SOUND SYS 4.5MHz
COLOUR SYS AUTO
<b>FINE TUNE</b>
SKIP OFF
POS. CHANGE 1

**4.** Press the "PRE." (PRESET) button 3 times.

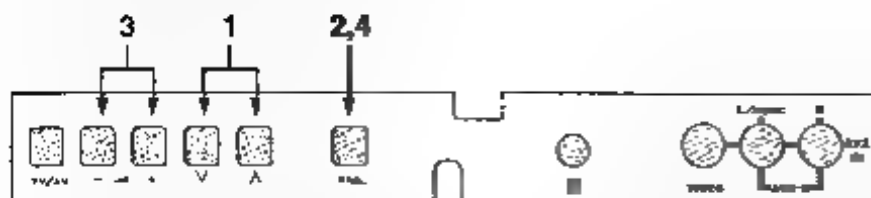
After all stations are tuned, press the "MAIN MENU" button twice.

This returns the set to the normal viewing condition.

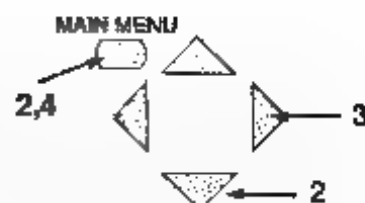
1
---

## Tuning Procedure

### How to cancel the Fine Tuning

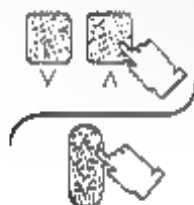


OR



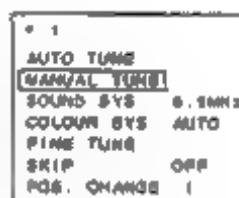
Cancelling previously adjusted (manually) fine tuning, means reactivating the AFC (Automatic Frequency Control) Function, also known as AFT (Automatic Frequency Tuning). Reactivating the Automatic Fine Tuning means allowing the set to automatically tune optimum tuning position, for that Channel Number.

1. Select the "AFC OFF" Channel Number which you want to return to Automatic Frequency Control (Cancel the manual fine tuning).



"AFC OFF" Channel Numbers are Indicated to you by the "u" symbol to the left of the Channel Number.

2. Press the "PRE." (PRESET) button 2 times, setting the Preset Menu to "MANUAL TUNE".

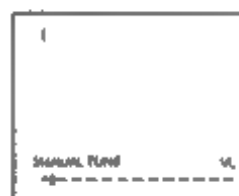


Manual Tune condition.

- Press the "MAIN MENU" and "Position" buttons, until the Preset Menu to "MANUAL TUNE".

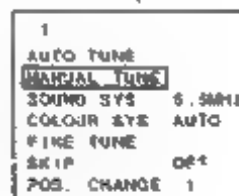


3. Press the Volume Up "+" or Down "-" button briefly.

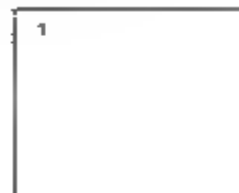


The best tuning position is automatically memorized.

- Press the Position Left or Right button briefly.



4. Press the "PRE." (PRESET) button 6 times.



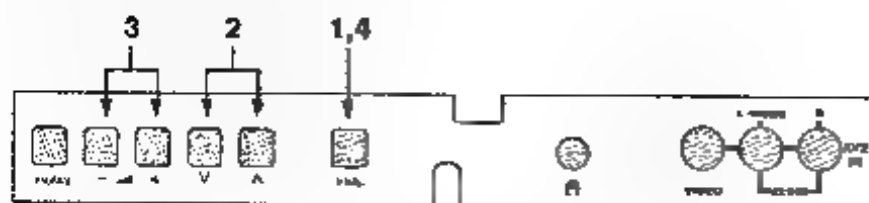
This returns the set to the normal viewing condition.

- Press the "MAIN MENU" button twice.

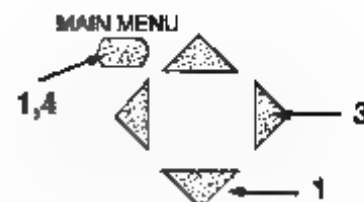


## Tuning Procedure

### How to Skip Programme Number



OR



1. Press the "PRE." (PRESET) button 6 times, setting the Preset Menu to "SKIP".



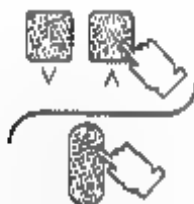
1
AUTO TUNE
MANUAL TUNE
SOUND SYS 0.5MHz
COLOUR SYS AUTO
FINE TUNE
SKIP OFF
POS. CHANGE 1

Channel Skip condition.

- Press the "MAIN MENU" and "Position" buttons, until the Preset Menu to "SKIP".



2. Select a Programme Number you want to skip, by pressing the Channel number Up or Down buttons.



2
AUTO TUNE
MANUAL TUNE
SOUND SYS 0.5MHz
COLOUR SYS AUTO
FINE TUNE
SKIP OFF
POS. CHANGE 2

3. Press the Volume Up "+" or Down "-" button.



3
AUTO TUNE
MANUAL TUNE
SOUND SYS 0.5MHz
COLOUR SYS AUTO
FINE TUNE
SKIP ON
POS. CHANGE 3

The displayed "OFF" condition changes to "ON".

- Press the Position Left or Right button.



4. Press the "PRE." (PRESET) button twice.



This returns the set to the normal viewing condition.

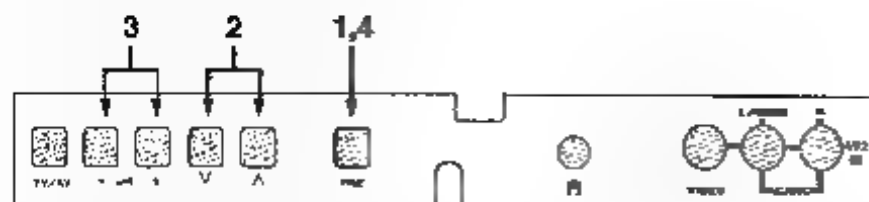
- Press the "MAIN MENU" button twice.



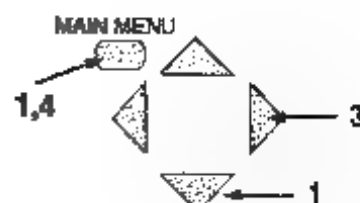


## Tuning Procedure

### How to Cancel the Skip Function



OR



1. Press the "PRE." (PRESET) button 6 times, setting the Preset Menu to "SKIP".

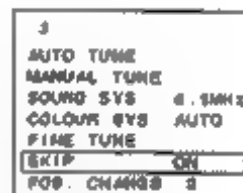


Channel Skip condition.

2. Press the "MAIN MENU" and "Position" buttons, until "SKIP" is selected.



2. Select the skipped Programme Number, by pressing the Channel Number Up or Down buttons.



3. Press the Volume Up "+" or Down "-" button.



The displayed "ON" condition changes to "OFF".

3. Press the Position Left or Right button.



3. Repeat step 2 and 3, if you wish to cancel the Skip function on any other programme number.

4. After the Skip Cancel operation is completed, press the "PRE." (PRESET) button twice.



This returns the set to the normal viewing condition.

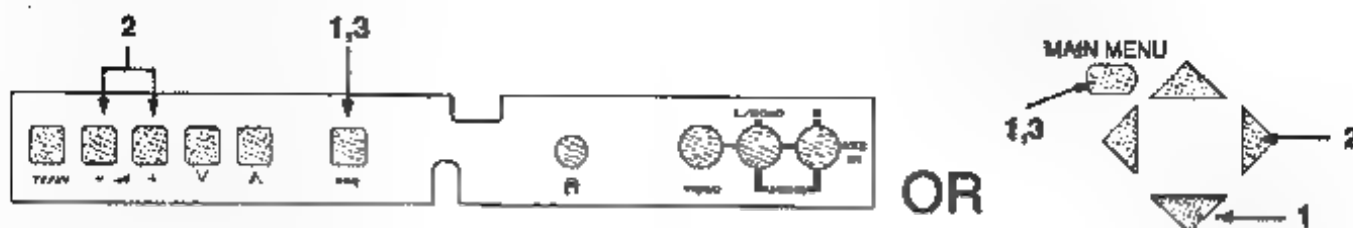
4. After the Skip Cancel Operation is completed, press the "MAIN MENU" button twice.



## Tuning Procedure

### Colour System Selection

Use this function if a clear picture with weak colour is obtained when a Broadcast or AV signal is received.



1. Press the "PRE." (PRESET) button 4 times.



1
AUTO TUNE
MANUAL TUNE
SOUND SYS 1. 5MHz
COLOUR SYS AUTO
FINE TUNE
SKIP OFF
POS. CHANGE 1

Colour System condition.

Press the "MAIN MENU" and "Position" buttons, until "COLOUR SYS" is selected.



2. Press the Volume Up "+" or Down "-" button repeatedly until the optimum image is produced.



1
AUTO TUNE
MANUAL TUNE
SOUND SYS 1. 5MHz
COLOUR SYS AUTO
FINE TUNE
SKIP OFF
POS. CHANGE 1

The Colour system will change as shown:

AUTO ↔ PAL ↔ SECAM  
↓  
NTSC 3.58 ↔ NTSC 4.43

Press the Position Left or Right button repeatedly until the optimum image is obtained.



3. Press the "PRE." (PRESET) button 4 times.



This returns the set to the normal viewing condition.

This selected Colour System is automatically memorized.

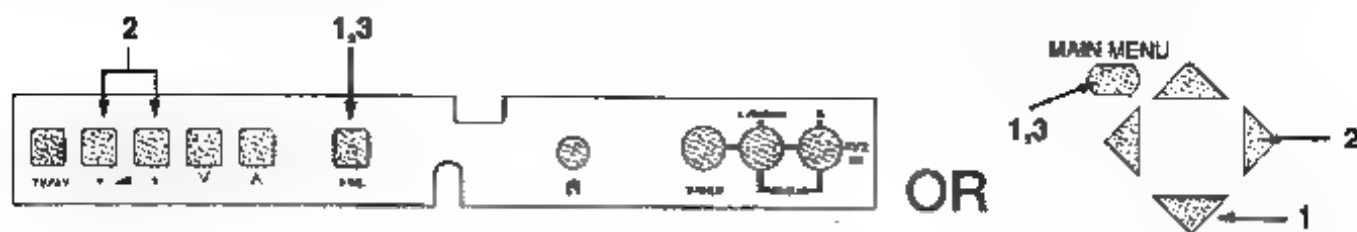
Press the "MAIN MENU" button twice.



## Tuning Procedure

### Sound System Selection

This function is used only in the TV mode, and is not applicable in AV mode.  
When the sound is not clear or no sound is produced on a channel.



1. Press the "PRE." (PRESET) button 3 times.



1
AUTO TUNE
MANUAL TUNE
SOUND SYS 8.5MHz
COLOUR SYS AUTO
FINE TUNE
SKIP OFF
POS. CHANGE 1

Sound System condition.

- Press the "MAIN MENU" and "Position" buttons, until "SOUND SYS" is selected.



2. Press the Volume Up "+" or Down "-" button repeatedly until the optimum sound is obtained.



- Press the Position Left or Right button repeatedly until the optimum sound is obtained.



1
AUTO TUNE
MANUAL TUNE
SOUND SYS 8.5MHz
COLOUR SYS AUTO
FINE TUNE
SKIP OFF
POS. CHANGE 1

The Sound system will change as shown:

4.5MHz ↔ 5.5MHz  
↓  
6.5MHz ↔ 8.0MHz

3. Press the "PRE." (PRESET) button 5 times.



- Press the "MAIN MENU" button twice.



This returns the set to the normal viewing condition.

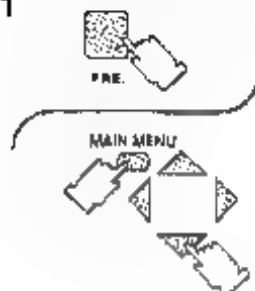
This selected Sound System is automatically memorized.

## Tuning Procedure

### Pos. Change

This feature will enable the user to swap (Exchange) channel memory of 2 selected channels. The position change function allows one to shift from the present channel to any programme number without any tuning process.

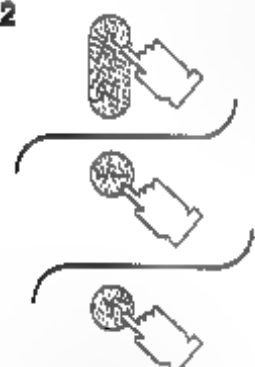
- 1 Press the "PRE." (PRESET) button 7 times.



Press the "MAIN MENU" and "Position" buttons, until "POS. CHANGE" is selected.

1
AUTO TUNE
MANUAL TUNE
SOUND SYS 5.56MHz
COLOUR SYS AUTO
FINE TUNE
SKIP OFF
POS. CHANGE 1

- 2 Select a Programme number you want to change by pressing either Channel Up or Down button, Two digit programme selection or Direct Programme number selection on the remote control.



Position change will only exist in preset mode.

1
AUTO TUNE
MANUAL TUNE
SOUND SYS 5.56MHz
COLOUR SYS AUTO
FINE TUNE
SKIP ON
POS. CHANGE 12

**Note:**  
Position change can also be operated by using the panel key. Use PRESET KEY to enter POSITION CHANGE. Then, use volume up/down to change the channel or to swap TV/AV.

3. Press the "TV/AV" button ■ confirm.



12
AUTO TUNE
MANUAL TUNE
SOUND SYS 5.56MHz
COLOUR SYS AUTO
FINE TUNE
SKIP ON
POS. CHANGE 12

This returns the set to the normal viewing condition.

Press the "PRE." (PRESET) button once.





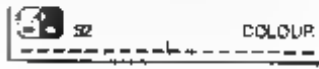














Press the "MAIN MENU" button twice.



## Advanced Remote Control Operation

### Picture Menu Operation



















#### Picture Menu

Press	Item	Effect	Indicator
 Select	<b>COLOUR</b>	 Less More	
 Select	<b>NTSC-TINT</b>	 Greenish Reddish	
 Select	<b>BRIGHT</b>	 Darker Brighter	
 Select	<b>CONTRAST</b>	 Less More	
 Select	<b>SHARPNESS</b>	 Less More	
 Select	<b>COLOUR TEMP.</b>	 STD. ↔ WARM	COLOUR TEMP.

## Advanced Remote Control Operation

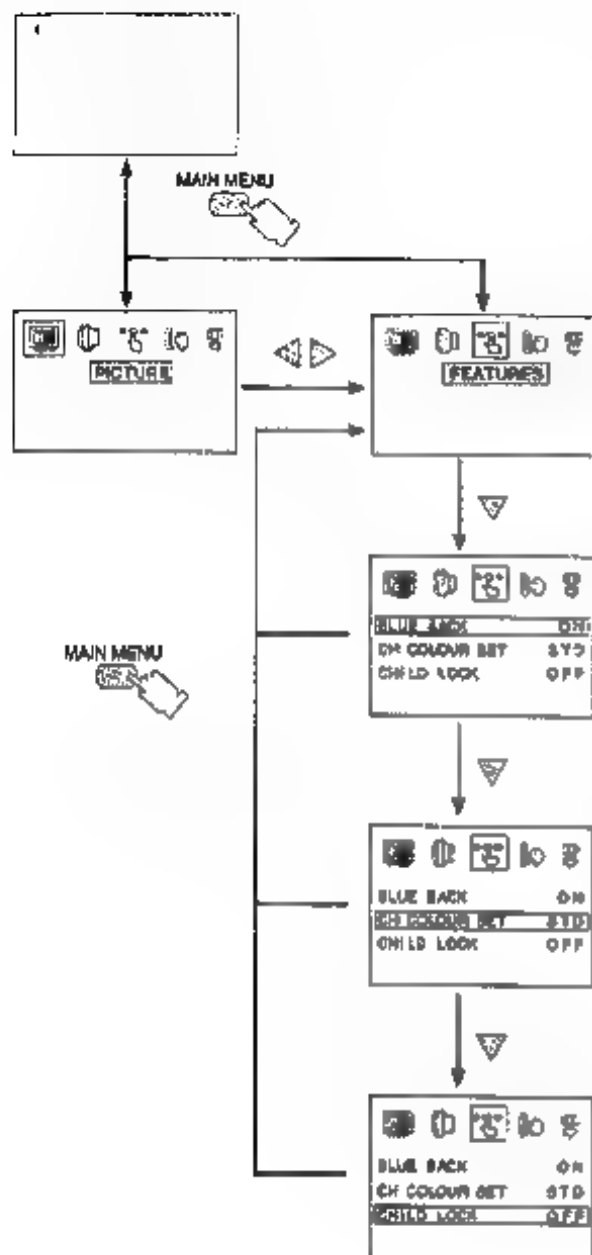
### Sound Menu Operation

#### Sound Menu

Press	Item	Effect	Indicator
 Select	<b>BASS</b>	  Less More	
 Select	<b>TREBLE</b>	  Less More	
 Select	<b>BALANCE</b>	  Left SP. Right SP.	
 Select	<b>BASS BOOST</b>	  ON ↔ OFF	<b>BASS BOOST</b>
 Select	<b>LOUDNESS</b>	  ON ↔ OFF	<b>LOUDNESS</b>

## Advanced Remote Control Operation

### Features Menu Operation



#### BLUE BACK Mode

When no picture signal is received, or the signal is weak, the screen reverts to a blue background colour and the sound is muted.

Disable this feature to continue watching very weak signals.



Blue background colour if no input picture signal or input signal is weak.

#### Note:

If BLUE BACK Mode is set on while a VCR signal is being viewed, selecting CUE or REVIEW may cause the screen to revert to the blue background colour. Disable this feature to view correctly.

#### CH (Channel) COLOUR SET mode

Colour density varying between broadcast channels can be adjusted to three levels for each reception channel as follows:



#### CHILD LOCK mode

To child lock any channel, press the position left or right button.

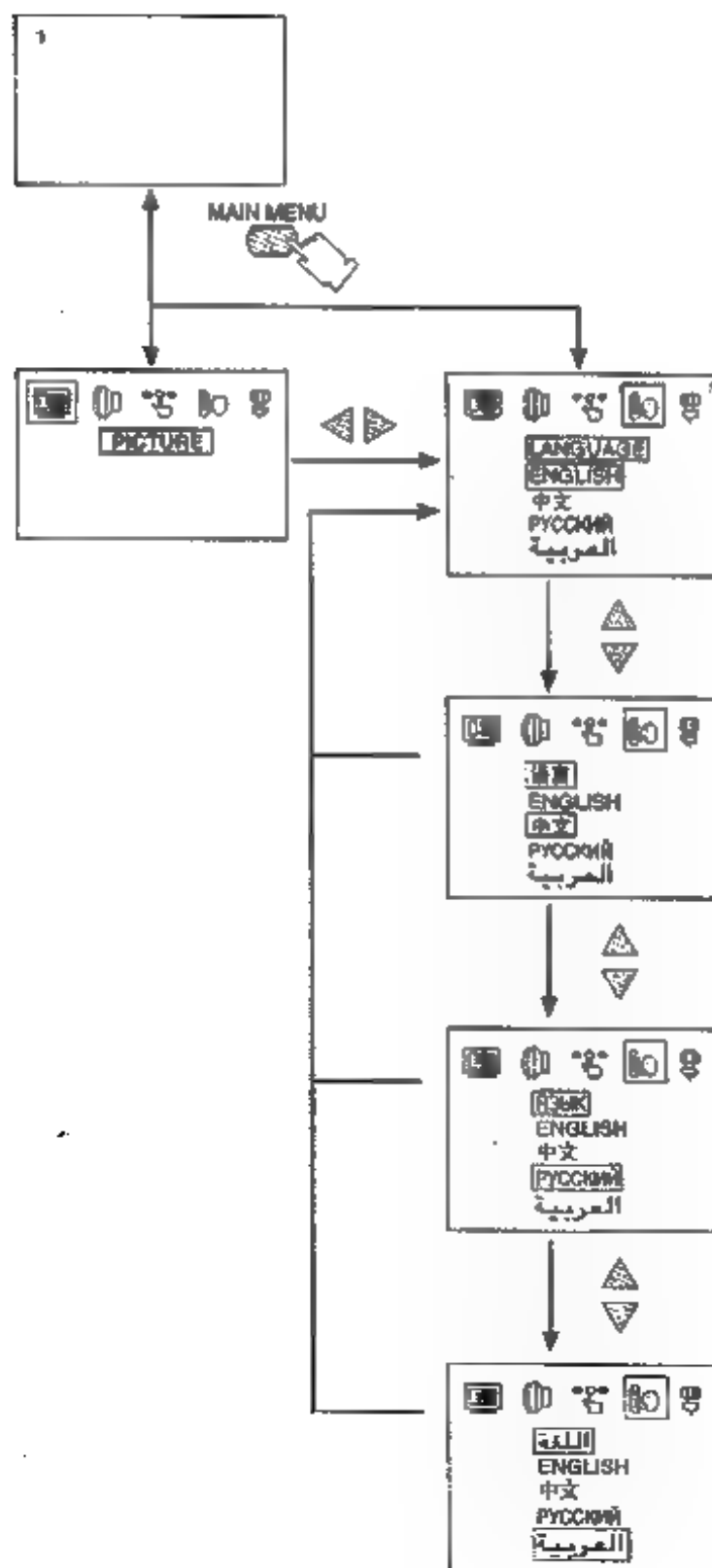
- 1) When channel is "LOCK", sound is muted and screen becomes blue colour.
- 2) If any of the channels is CHILD LOCK, then preset key at any panel will not work. If preset key (Panel) is pressed, message "CHILD LOCK ON" will appear.
- 3) Main power ON in child locked channel will display "CHILD LOCK ON" on screen to remind user that the Child Lock is On and is in Child locked channel.
- 4) Each channel has its own memory for channels to be child locked.

## Advanced Remote Control Operation

## Language Menu Operation

## Language Menu

Press the "Position Up or Down" button. The on-screen language display will change as follows:





# Advanced Remote Control Transmitter Operation




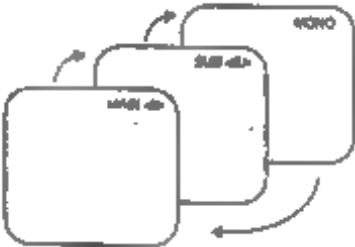


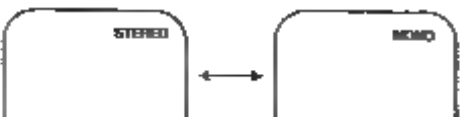
## Stereo Reception



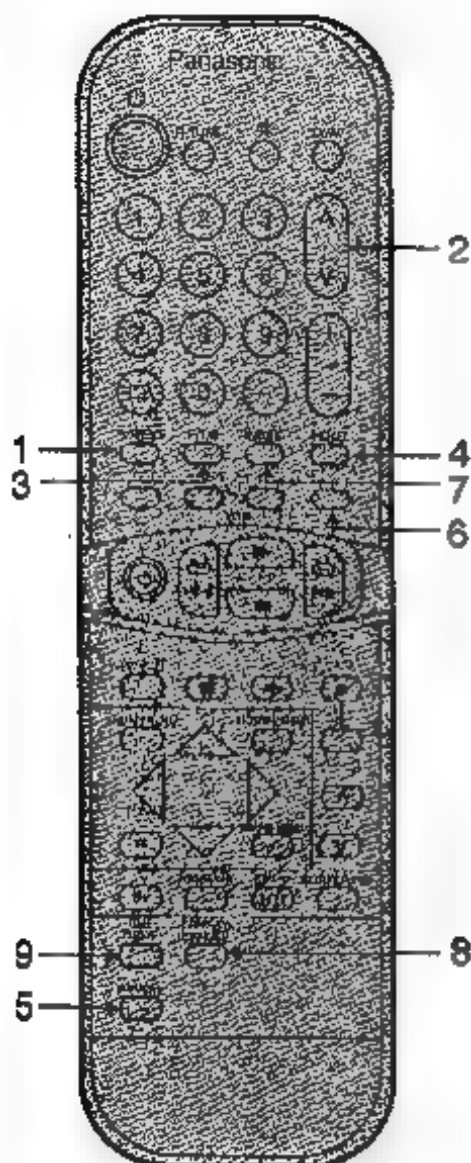
### Stereo/Bilingual Sound Selection Button

Sound output modes can be selected by pressing the "Sound Selection" Button.

STEREO, BILINGUAL (transmitted) and MONO modes can be selected using this button.

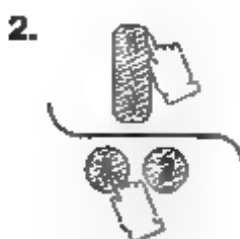
	Types of Broadcast	On-screen Indication	Remarks
NICAM Digital Stereo	Regular Broadcast (Standard Audio)		Normal use
	Regular + NICAM MONO I [MAIN <I>]		You can select either the "MAIN <I>" or "MONO" audio signal
	NICAM STEREO		You select either the "STEREO" or "MONO" mode.
	NICAM DUAL MONO MAIN <I> / SUB <II>		You can select either the "MAIN <I>", "SUB <II>" or "MONO".
A2 (German) Stereo	Regular Broadcast (Standard Audio)		Normal use
	BILINGUAL or DUAL MONO MAIN <I> / SUB <II>		You can select either the "MAIN <I>" or "SUB <II>" audio signal.
	STEREO		You can select either the "STEREO" or "MONO" mode.

## Teletext Operation



### TV/Teletext mode

By pressing the TV/TEXT button, to change the TV/Teletext mode as follows:



### Page Selection

Page can be selected in two ways:

- Press the Up/Down Buttons to increase or decrease the page number by one.
- By entering the page number, using 0 - 9 on the remote control.



### Full/Top/Bottom

Press to expand the Top of the page.  
Press again to expand the Bottom half.  
Press again to return to normal (Full) size.



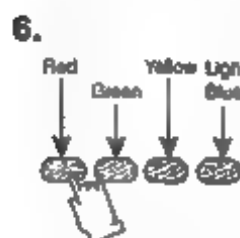
### Hold

Press to hold the current page.  
Press again to cancel the hold.



### Reveal

Press to reveal hidden words.  
e.g. quiz page answer.  
Press again to hide.



### Colour-coded buttons

■ Fastext mode these correspond to the differently coloured subjects.



### Index

Press INDEX to return to the main index page.



### Display Cancel

Press the "DISPLAY CANCEL" button to view the normal TV programme.  
When the desired sub-page is received, the "TEXT" message appears at the top left of the screen.

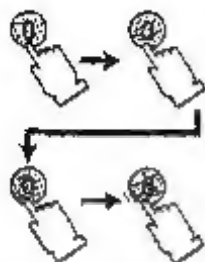
## Teletext Operation

9.



### TIME TEXT

Press the TIME TEXT button.



Enter desired sub page number.  
To select page 8 enter 0,0,0 and 6.



Press the DISPLAY CANCEL button to view a normal TV programme.

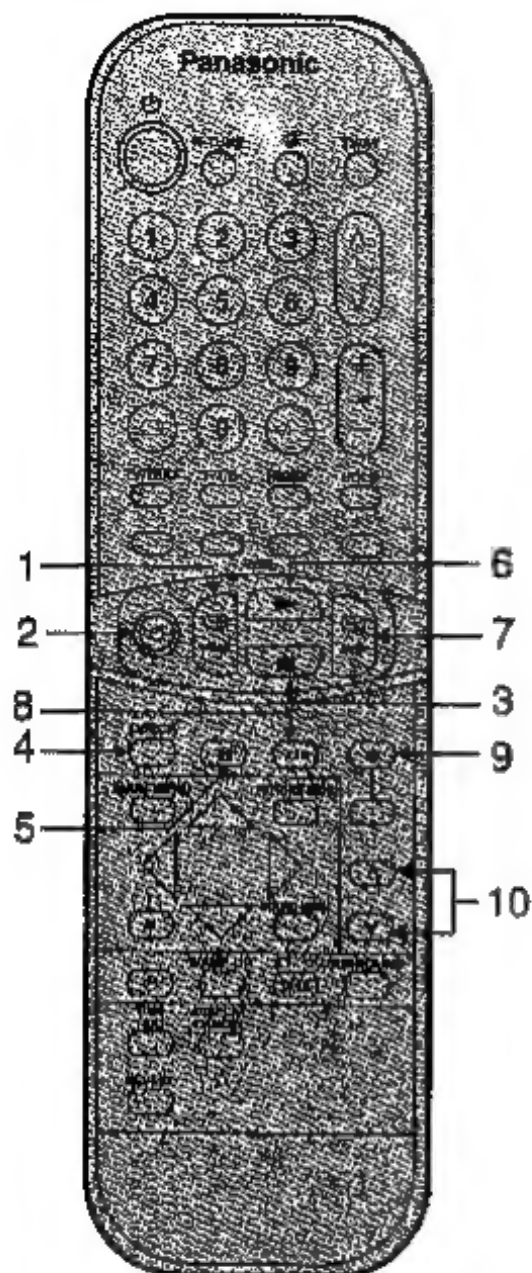












When the page is available, press the TV/TEXT button twice to view the sub page.

## Operation of VCR

Your remote control is designed to be used with selected Panasonic/National VCRs.









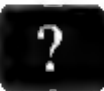







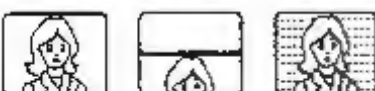

Some VCR models have different functions, so please refer to the individual VCR instruction manual to ensure compatibility.



1.  Rew (Rewind)/Review Button
2.  VCR Power Button
3.  Stop Button
4.  TV/VCR Selection Button
5.  Pause / Still Button
6.  Play Button
7.  FF (Fast forward) / Cue Button
8.  Still advance Button
9.  Rec (Record) Button
10.  Channel Up and Down Button for VCR

# Troubleshooting

Before calling for service, determine the symptoms and make a few simple checks as shown below.

Symptoms		Checks
Picture	Sound	
 Snowy Picture	 Noisy Sound	Aerial Location, direction Connection
 Multiple Image	 Normal Sound	Aerial Location, direction Connection
 Interference	 Noisy Sound	Electrical Appliances Cars / Motorcycles Fluorescent Lamps
 Normal Picture	 No Sound	Volume (Check whether the mute function has been activated on the Remote Control.)
 No Picture	 No Sound	Not plugged into AC outlet Not switched on Contrast and Brightness / Volume Setting (Check by pressing the Power Switch or Stand-by Button on the Remote Control.)
 No Colour	 Normal Sound	Colour Control
 Scrambled	 Weak Sound	Re-tune Channels
 Colour Patches	 Normal Sound	Magnetic Interference from unshielded equipment. Receiver moved while "ON"
 No Colour Rolling Picture H-Line	 Noisy Sound	System Button

## Specifications

Power Source: AC SINGLE 230V, 50Hz

Power Consumption: 180 W

Receiving System: 17 SYSTEMS

	SYSTEMS	FUNCTION
1. 2. 3. 4. 5. 6. 7.	PAL B,G,H PAL I PAL D,K SECAM B,G SECAM D,K SECAM K1 NTSC M (NTSC 3.58 / 4.5MHz)	Reception of broadcast transmissions and playback from video cassette tape recorders.
8. 9. 10. 11. 12. 13. 14.	NTSC 4.43 / 5.5MHz NTSC 4.43 / 6.0MHz NTSC 4.43 / 6.5MHz NTSC 3.58 / 5.5MHz NTSC 3.58 / 6.0MHz NTSC 3.58 / 6.5MHz SECAM I	Playback from special VCR only.
15. 16. 17.	PAL 60Hz / 5.5MHz PAL 60Hz / 6.0MHz PAL 60Hz / 6.5MHz	Playback from special Disc player and VCR only.

Receiving Channels:

VHF BAND		UHF BAND		CATV
2 - 12	PAL / SECAM B,K1	21 - 69	PAL G,H,I / SECAM G,K,K1	S1 - S20 (OSCAR)
0 - 12	PAL B (AUST.)	28 - 69	PAL B (AUST.)	1 - 125 (USA CATV)
1 - 9	PAL B (N.Z.)	13 - 57	PAL D,K	C13 - C49 (JAPAN)
1 - 12	PAL / SECAM D	13 - 62	NTSC M (JAPAN)	S21 - S41 (HYPER)
1 - 12	NTSC M (JAPAN)	14 - 69	NTSC M (U.S.A.)	Z1 - Z37 (CHINA)
2 - 13	NTSC M (U.S.A.)			5A, 9A (AUST.)

Tuning System: Frequency synthesizer Auto search tuning: 100 position.

Picture Tube: 69 cm, measured diagonally, 110° deflection.

Audio Output: 7.5 W x 2 (Speaker)

Aerial Impedance: 75  $\Omega$  Unbalanced coaxial.

Video/audio terminal:

AV1	S-Video in	Y: 1.0 Vp-p, 75 $\Omega$	AV2	Video In	1 Vp-p, 75 $\Omega$
		C: 0.3 Vp-p, 75 $\Omega$		Audio In	Approx: 400mV
	Video In	1 Vp-p, 75 $\Omega$		Video Out	1 Vp-p, 75 $\Omega$
	Audio In	Approx: 400mV		Audio Out	Approx: 400mV

Remote Control Transmitter: EUR51979

Battery: R6 (AA) x 2

Dimension (W x D x H): 780 x 479.7 x 581.8 mm

Weight (Net): 37 kg

**Note:**

Design and Specifications are subject to change without notice.